

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
UPLAND WILDLIFE HABITAT MANAGEMENT
 (acre)

Code 645

Texas Supplement, Zone 4

Mourning Dove

This pigeon-like bird is a member of the order Columbiformes. Texas is home to nine of the members of this family including the mourning dove, white-winged dove, white-tipped dove, rock dove, red-billed pigeon, band-tailed pigeon, Eurasian collared- dove, ringed turtle-dove, common ground-dove, and Inca dove.

The mourning dove is very streamlined and sleek, varying from 11 to 13 inches in length and weighing 3.5 to 5 ounces. It has the largest range of all North American game birds, breeding from Canada to the Bahamas.

Mourning doves are monogamous and both sexes incubate the eggs. Most nests are placed in trees. Normal clutch size is two. Incubation requires 14 to 15 days. The dove is altricial (young are helpless at hatching). A glandular secretion, "pigeon milk" from both parents crop, is the only food the young receive until they leave the nest. Raising a brood requires about a month. Within a week after the young leave the nest the parents either lay another clutch or leave for migration. The young do not breed the first year.

In 1997, the estimated annual revenue generated by dove hunters for goods and services to local economies was \$50 million.

Habitat Requirements

Food

More than 99 percent of their diet is composed of seeds or plant parts. Grasses make up more than 50 percent of the seeds

consumed. Grass seeds eaten include barnyardgrass, panicums, foxtails, Johnsongrass, crabgrass, and canarygrass. Forb seeds include species from the spurge/croton, pokeweed, and pigweed families.

Agricultural crop seed eaten by dove include peanuts, watermelon, sorghum/sudan, wheat, rye, oats, sunflower, soybeans, corn, and milo. The decrease in crop farming in East Texas and the increase of "improved grasses" has had a negative effect on the abundance of dove in fall and winter months.

Cover

Doves thrive where there is a lot of different cover types or "edges". Generally, the more diverse the cover types per unit area, the better. An approximate ideal ratio of pasture/cropland to brush/trees is 50:50. Doves prefer to nest in the outer 30 yards of large uniform brush/tree tracts. Trees in cities and around rural homes are favorite nest sites. Doves prefer to feed on sites where bare ground is present although there may be a canopy overhead.

Water

The need for water is high, especially during the nesting season. It is seldom a limiting factor in East Texas due to the bird's mobility.

Habitat Management Techniques

Food

Promoting early seral plant species that produce large, hard seed can increase the

food supply for dove. As the cover of perennial grasses increases on a site, the presence of desirable food plants will decline. Reversing plant succession to favor large, hard seed production can be done in several ways:

Disking, or similar soil disturbance, will reduce perennial grass cover. Such disking can be done any time of the year, but most often is done in late winter and/or early fall prior to germination of desirable food plants. Disking should be only deep enough to uproot the majority of existing grasses. Disking in strips or bands adjacent to good nesting cover and good woody cover will insure that cover and food are properly interspersed. Even small amounts of disking will be beneficial, but to impact a large area, disking should be done on 5 to 15% of an area. Disking does not need to be done on the same area each year. Ideally, some fresh disking, and some one or two year old disking should be present across the landscape. Re-disk areas only when perennial grasses begin to dominate. A program of disking where half is done in early fall and half in late winter will insure a greater diversity of desired plants.

Grazing can be used to promote early seral plants and increase the food supply. When perennial grasses begin to dominate and suppress desired species, heavy grazing for a period will reduce the perennial grass cover and allow plants with large, hard seeds to grow. The objective is to heavily graze some areas without overgrazing the entire pasture. Fencing small-scattered areas may work best.

Prescribed fire can also be used to remove or reduce excessive grass growth. Prescribed burning according to a written burn plan and carried out under the supervision of an experienced burner has many benefits to wildlife habitat. This practice must be carried out carefully since fire also removes nest cover of ground nesting birds and can remove needed woody cover. An ideal burn for dove habitat is called a mosaic burn, where the fire does not burn across completely. One third to half of the area should remain unburned. This is often accomplished by burning under mild conditions, which creates a cooler fire.

The use of extra internal fireguards to protect specific areas is another way to insure that the burn is not detrimental.

Fire and grazing can be used in combination to create small "weed plots". Burn numerous small areas of 2 to 5 acres within a large pasture. When the pasture is grazed, livestock will move to the burned plots and graze them very heavily, thus favoring the growth of plants desired by doves.

Where farmland is present, crops can be selected which provide food for dove and land can be managed to increase the value to dove.

Seed crops such as grain sorghum, corn, peanuts, soybeans, cowpeas, sesame, wheat, oats, rye and triticale can add large amounts of seed for dove.

Retain waste grain on the soil surface from harvest until the land is prepared for the next crop. If plowing is needed, use a chisel plow rather than disk plow.

Retain up to 50 or 100 feet of unharvested grain or seed crops around the edges of fields where other habitat needs are present on adjacent areas.

Include forbs, legumes and large seeded grasses in range seeding mixtures

Annual food plots are an option if farming is feasible in the area and suitable soils are present. Plant annuals such as grain sorghum, millets, or small grains or re-seeding annuals such as partridge pea or sunflower. Mixtures of several species are more likely to provide dove food for an extended period. Low to moderate fertilizer rates should be applied to avoid heavy herbaceous growth. Food plots must be protected from livestock grazing. Where deer numbers are high, browsing may destroy plots.

Federal and State "baiting laws" should be reviewed before hunting over food plots.

Cover

Cover is seldom a limiting factor in East Texas although motts of tree and brush are welcome loafing and nesting sites.

Water

Adult mourning doves require fresh water regularly and fly to open water in the morning and evening after feeding. The minimum daily water ration averages 3 percent of body weight. Under hot conditions they may double the intake of water. Doves prefer to water at streams and ponds that have bare banks. They also like to have snags and trees close to a watering hole.

References

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George, R.R. 1988. Mourning doves in Texas; life history, habitat needs, and management suggestions. TPWD, Austin. 18 pp.

Roberson, J. 1998. Habitat management for mourning doves. Texas Wildlife Magazine. Texas Wildlife Association, San Antonio. pp. 19-23.

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Table 1 Important Native and Naturalized Dove Food Plants

Woody Plants

Hackberry
Sumac
Prickly Ash
Dewberry
Blackberry
Grape
Pine

Grasses

Johnsongrass
Wildrye
Little barley
Japanese Brome
Bristlegrass
Crabgrass
Green sprangletop
Wild millets
Texas panicum

Forbs

Ragweeds
Crotons
Bundleflower
Dayflower
Pokeberry
Spurges
Sunflowers
Partridge pea
Pigweeds
Common lespedeza
Smartweeds
Vetches

**Table 2. Planting Information for Commercially Available Seed
Used for Food Plots or to Enhance Dove Food Supply**

	Seed Rate Lbs/Acre			
	Broadcast [commercial seed]	Planting Dates	Planting Depth In.	Comments
Cool Season Annuals				
Elbon Rye	40-80	"	1	Does well in sandy sites
Oats	40-80	"	1	Well drained not deep sand
Wheat	40-80	"	1	Well drained not deep sand
Hairy vetch	10-20	"	1/4-1/2	Will grow on deep sands
Singletary Pea	10-20	"	1/4--1/2	Adapted to wet sites - bottoms
Warm Season Annuals				
Cowpeas	20 - 40	April-June	1/2	Iron/Clay best combo with deer
Soybeans	40-60	"	1	
American Jointvetch	10-20	"	1/4	Deer may over browse - Plant in combination with Iron/clay pea 40/10
Rape	10	"	1/4	
Corn	8-12	March-May	1	Should be rowed and cultivated
Milo	10	"	1/2 - 1	Best if rowed and cultivated
Partridge pea	6-10	"	1/4	
Sesame	10	April - May	1/4	Plant old open podded variety
Browntop millet	10-20	April - June	1/4	Excellent seed producer
Common Sunflower	10-20	Fall	1/2-1	Best to plant in fall. Disk in late fall for natural reseeding.

Approval

/s/ Gary Valentine, State Wildlife Biologist

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